

05-02-06

IFW

PATENT  
CASE NO. 21191Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: MCMANUS, ET AL.Serial No. 40/162,091 10/726091 ✓Filed December 2, 2003Group Art Unit 11626Examiner Sackey, Ebenezer O.

For: REDUCTIVE ALKYLATION OF SATURATED CYCLIC AMINES

Transmitted herewith is an amendment in the above-identified application.

☒ No additional fee is required.☐ The fee has been calculated as shown below.

## CLAIMS AS AMENDED

(1)	(2) Claims remaining after amendment	(3)	(4) Highest Number Previously Paid For	(5) Present Extra	(6) Rate	(7) Additional Fee
Total Claims	* _____	-	** <u>20</u> =	<u>0</u> X	\$50	= <u>0.00</u>
Independent Claims	* _____	-	*** <u>3</u> =	<u>0</u> X	\$200	= <u>0.00</u>
Multiple Dependent Claims					\$360 ****	= _____
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT →						0.00

\* If the entry in Column 2 is less than the entry in Column 4, write "0" in Column 5.

\*\* If the "Highest Number Previously Paid For" in this space is less than 20, write "20" in this space.

\*\*\* If the "Highest Number Previously Paid For" in this space is less than 3, write "3" in this space.

\*\*\*\* Add this fee only if application is amended to include multiple dependent claims (regardless of number) and no multiple dependent claims were originally filed.

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Respectfully,

Kenneth R. Walton

By: Kenneth R. Walton

Attorney \_\_\_\_\_ for Applicant(s)

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Date: May 1, 2006

IN DUPLICATE



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: McManus et al.

Serial No.: ~~10/762,091~~ 10/726091 Case No.: 21191

Filed: December 2, 2003

For: REDUCTIVE ALKYLATION OF SATURATED CYCLIC AMINES

Art Unit:  
1626

Examiner:  
Sackey, Ebenezer O.

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Sir:

This communication is in response to the Office Action mailed March 27, 2006, which set a one-month period for response that expires today. Claims 1-26 are pending. The Examiner has required restriction under 35 U.S.C. § 121 to one of the inventions I, II, III, and IV as set forth on page 2 of the Office Action. Group I (claims 1-13) is elected with traverse.

The processes of Groups I-IV are more remarkable for their similarities than their differences. All of the processes are directed to the reductive alkylation of a cyclic amine and all are concerned with the production of an alkylated cyclic amine product free of any borane complexes thereof. In Group I, the starting cyclic amine is reacted with a suitable aldehyde in the presence of an alkylcarboxylic acid with removal of by-product water to afford an iminium salt, to which is added a tetrahydroborate salt to obtain the desired alkylated cyclic amine plus borane complexes thereof, which is treated with a Pt or Pd catalyst in the presence of an alcohol to provide the desired alkylated cyclic amine free of borane complexes. Group II is related to Group I as species to genus; i.e., Group II employs the same chemistry as Group I, but has more narrowly defined reactants and products. The claims of Group II could have been written to depend from claim 1 of Group I.

Group III employs the same reactants as Group I (i.e., an aldehyde of Formula II, a cyclic amine of Formula III, an alkylcarboxylic acid, and a tetrahydroborate salt) to obtain the same product as Group I (i.e., an alkylated cyclic amine of Formula I). The chemistry differs only in that it does not involve the use of a Pt or Pd catalyst with alcohol to remove the borane complexes. Group IV is related to Group III as species to genus; i.e., Group IV employs the

same chemistry as Group III, but has more narrowly defined reactants and products. The claims of Group IV could in fact have been written to depend from claim 19 of Group III.

In summary, it is more logical to view Groups I to IV as aspects of the same invention rather than as separate inventions.

Assuming arguendo that the inventions set forth in Groups I to IV are independent and distinct, there is no serious burden in conducting a search of these Groups in the same application. Any reasonable search of Group I would necessarily include a search of Group II, because Group II is embraced by Group I. A reasonable search of Group I would also include within its scope a search of the processes set forth in Groups III and IV, because these processes have similar chemistry and employ the same reactants leading to the same product. It is much more inefficient to essentially repeat the same search in 4 separate applications than to do it once and for all in this application. The same logic obviously applies to the other groups as well; i.e., any reasonable search of Group II would necessarily include within its scope the processes set forth in Groups I, III and IV, and so forth.

In view of the foregoing, withdrawal of the restriction requirement is requested.

Respectfully submitted,

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**P&T Office ACKNOWLEDGEMENT**

ATTORNEY		DATE
K. R. Walton		May 1, 2006
CASE NUMBER/	SERIAL NUMBER	
21191	10726091	
DATE FILED		
12/02/03		
APPLICANT		
McManus, et al.		
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The Patent & Trademark Office acknowledges, and has stamped hereon, the date of the receipt of the items checked below:

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- ☐ CERTIFICATE OF CORRECTION
- ☐ FINAL FEE
- ☐ LETTER
- ☐ INFORMATION DISCLOSURE STATEMENT
- ☐ PTO 1449 & REFERENCES
- ☐ PETITION FOR EXTENSION OF TIME & FEE
- ☐ INVITATION TO CORRECT
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